

**AMENDMENTS TO THE CLAIMS:**

This listing of Claims will replace all prior versions, and listings, of Claims in the application:

**Listing Of Claims:**

Claim 1 (Currently Amended) A process for hydroprocessing a heavy hydrocarbon oil, comprising contacting a heavy hydrocarbon oil in the presence of hydrogen with a mixture of hydroprocessing catalyst I and hydroprocessing catalyst II, wherein catalyst I comprises a Group VIB metal component and optionally a Group VIII metal component on a porous inorganic carrier, said catalyst having a specific surface area of at least  $100 \text{ m}^2/\text{g}$ , a total pore volume of at least  $0.55 \text{ ml/g}$ , at least 50% of the total pore volume in pores with a diameter of at least  $20 \text{ nm}$  ( $200 \text{ \AA}$ ), and 10-30% of the total pore volume in pores with a diameter of at least  $200 \text{ nm}$  ( $2000 \text{ \AA}$ ), and catalyst II comprises a Group VIB metal component and optionally a Group VIII metal component on a porous inorganic carrier, said catalyst having a specific surface area of at least  $100 \text{ m}^2/\text{g}$ , a total pore volume of at least  $0.55 \text{ ml/g}$ , at least 75% of the total pore volume in pores with a diameter of  $10\text{-}120 \text{ nm}$  ( $100\text{-}1200 \text{ \AA}$ ), 0-2% of the total pore volume in pores with a diameter of at least  $400 \text{ nm}$  ( $4000 \text{ \AA}$ ), and 0-1 % of the total pore volume in pores with a diameter of at least  $1000 \text{ nm}$  ( $10000 \text{ \AA}$ ); and wherein both catalyst I and catalyst II have less than 25% of their total pore volume in pores of a diameter of  $10 \text{ nm}$  ( $100 \text{ \AA}$ ) or less.

Claim 2 (Original) The process of claim 1 wherein catalyst II comprises a catalyst IIa, a catalyst IIb, or a mixture thereof, wherein catalyst IIa comprises 7 to 20 wt.% of a Group VIB metal component, calculated as trioxide on the weight of the catalyst, and 0.5 to 6 wt.% of a Group VIII metal component, calculated as oxide on the weight of the catalyst, on a porous inorganic carrier, said catalyst having a specific surface area of  $100\text{-}180 \text{ m}^2/\text{g}$ , a total pore volume of at least  $0.55 \text{ ml/g}$ , at least 85% of the total pore volume in pores with a diameter of  $10\text{-}120 \text{ nm}$  ( $100\text{-}1200 \text{ \AA}$ ), 0-2% of the total pore volume in pores with a diameter of at least  $400 \text{ nm}$  ( $4000 \text{ \AA}$ ), and 0-1 % of the total pore volume in pores with a diameter of at least  $1000 \text{ nm}$  ( $10000 \text{ \AA}$ ) and catalyst IIb comprises 7 to 20 wt.% of a Group VIB metal component, calculated as trioxide on the weight of the catalyst, and 0.5 to 6 wt.% of a Group VIII metal component, calculated as oxide on the weight of the

catalyst, on a porous inorganic carrier preferably comprising at least 3.5 wt.% of silica, calculated on the weight of the final catalyst, said catalyst having a specific surface area of at least  $150 \text{ m}^2/\text{g}$ , a total pore volume of at least  $0.55 \text{ ml/g}$ , at least 75% of the total pore volume in pores with a diameter of 10-120 nm (100-1200 Å), 0-2% of the total pore volume in pores with a diameter of at least 400 nm (4000 Å), and 0-1 % of the total pore volume in pores with a diameter of at least 1000 nm (10000 Å).

Claim 3 (Original)                      The process of claim 2 wherein catalyst IIb additionally comprises a Group IA metal component and/or a Group VA metal component, in particular phosphorus.

Claim 4 (Original)                      The process of claim 2 wherein a mixture of catalysts IIa and IIb is applied, wherein catalyst IIa has at least 50% of its pore volume in pores with a diameter above 200 Å, and catalyst IIb has at most 50% of its pore volume in pores with a diameter above 200 Å.

Claim 5 (Original)                      The process of claim 1 wherein the heavy hydrocarbon feed of which at least 50 wt.%, preferably at least 80 wt.%, boils above  $538^\circ\text{C}$ , and which comprises at least 2 wt.% of sulfur and at least 5 wt.% of Conradson Carbon.

Claim 6 (Original)                      The process of claim 1 which is carried out in an ebullating bed.

Claim 7 (Currently Amended)      A mixture of catalysts comprising a catalyst I which comprises a Group VIB metal component and optionally a Group VIII metal component on a porous inorganic carrier, said catalyst having a specific surface area of at least  $100 \text{ m}^2/\text{g}$ , a total pore volume of at least  $0.55 \text{ ml/g}$ , and a pore size distribution for inhibiting sediment formation and promoting asphaltene removal such that at least 50% of the total pore volume in pores with a diameter of at least 20 nm (200 Å), and 10-30% of the total pore volume in pores with a diameter of at least 200 nm (2000 Å), and a catalyst II which comprises a Group VIB metal component and optionally a Group VIII metal component on a porous inorganic carrier, said catalyst having a specific surface area of at least  $100 \text{ m}^2/\text{g}$ , a total pore volume of at least  $0.55 \text{ ml/g}$ , and a pore size distribution for providing catalytic activity such that at least 75% of

the total pore volume in pores with a diameter of 10-120 nm (100-1200 Å), 0-2% of the total pore volume in pores with a diameter of at least 400 nm (4000 Å), and 0-1 % of the total pore volume in pores with a diameter of at least 1000 nm (10000 Å); and wherein both catalyst I and catalyst II have less than 25% of their total pore volume in pores of a diameter of 10 nm (100 Å) or less.

Claim 8 (Previously Presented) The catalyst mixture of claim 7 wherein catalyst II comprises a catalyst IIa, a catalyst IIb, or a mixture thereof, wherein

catalyst IIa comprises 7 to 20 wt.% of a Group VIB metal component, calculated as trioxide on the weight of the catalyst, and 0.5 to 6 wt.% of a Group VIII metal component, calculated as oxide on the weight of the catalyst, on a porous inorganic carrier, said catalyst having a specific surface area of 100-180 m<sup>2</sup>/g, a total pore volume of at least 0.55 ml/g, at least 85% of the total pore volume in pores with a diameter of 10-120 nm (100-1200 Å), 0-2% of the total pore volume in pores with a diameter of at least 400 nm (4000 Å), and 0-1 % of the total pore volume in pores with a diameter of at least 1000 nm (10000 Å) and

catalyst IIb comprises 7 to 20 wt.% of a Group VIB metal component, calculated as trioxide on the weight of the catalyst, and 0.5 to 6 wt.% of a Group VIII metal component, calculated as oxide on the weight of the catalyst, on a porous inorganic carrier preferably comprising at least 3.5 wt.% of silica, calculated on the weight of the final catalyst, said catalyst having a specific surface area of at least 150 m<sup>2</sup>/g, a total pore volume of at least 0.55 ml/g, at least 75% of the total pore volume in pores with a diameter of 10-120 nm (100-1200 Å), 0-2% of the total pore volume in pores with a diameter of at least 400 nm (4000 Å), and 0-1% of the total pore volume in pores with a diameter of at least 1000 nm (10000 Å).

Claim 9 (Original) The catalyst mixture of claim 8 wherein catalyst IIb additionally comprises a Group IA metal component and/or a Group VA metal component, in particular phosphorus.

Claim 10 (Original) The catalyst mixture of claim 8 wherein a mixture of catalysts IIa and IIb is applied, wherein catalyst IIa has at least 50% of its pore volume in pores with a diameter above 200 Å, and catalyst IIB has at most 50% of its pore volume in pores with a diameter above 200 Å.